In the Claims:

Please amend the claims as follows:

1. (original) A monoclonal antibody (Mab) or fragment thereof that binds NCA90 or NCA95, wherein when the Mab or fragment thereof binds NCA90 the Mab or fragment thereof is chimeric, partially humanized or fully humanized and wherein when the Mab or fragment thereof binds NCA95 the Mab or fragment thereof is either fully humanized or chimeric, partially humanized or fully humanized BW 250/183.

2. (original) The antibody or fragment of thereof of claim 1 wherein the Mab or fragment thereof is fully humanized or chimeric, partially humanized or fully humanized BW 250/183.

3. (original) The antibody or fragment of claim 1 wherein the antibody or fragment thereof is chimeric, partially humanized or fully humanized MN3.

4. (currently amended) The antibody or fragment thereof of claim 1, comprising:

(A) at least one complementarity-determining region (CDR) of a murine MN3 Mab selected from:

(i) a light chain variable region of the chimeric, partially humanized or fully humanized MN3 antibody comprising a CDR1 comprising an amino acid sequence RSSQSIVHSNGNTYLE **(SEQ ID NO: 1)**, a CDR2 comprising an amino acid sequence KVSNRFS **(SEQ ID NO: 2)** or a CDR3 comprising an amino acid sequence FQGSHVPPT **(SEQ ID NO: 3)**; or

(ii) a CDR of the heavy chain variable region of the chimeric, partially humanized or fully humanized MN3 antibody comprising a CDR1 comprising an amino acid sequence of NYGMN **(SEQ ID NO: 4)**, a CDR2 comprising an amino acid sequence of WINTYTGEPTYADDFKG **(SEQ ID NO: 5)**, or a CDR3 comprising an amino acid sequence of KGWMDFNSSLDY **(SEQ ID NO: 6)**; and

(B) at least one framework (FR) region of the light and heavy chain variable regions of a human antibody or at least one light and heavy chain constant regions of a human antibody.

5. (original) The antibody or fragment thereof of claim 4, wherein at least one of the FRs of the light and heavy chain variable regions of the antibody or fragment thereof comprise at least one amino acid substituted with the corresponding amino acid of the MN3 antibody or fragment thereof.

6. (original) The antibody or fragment thereof of claim 4, wherein the at least one amino acid from the MN3 MAb is at least one amino acid selected from the group consisting of amino acid residue 27, 30, 67, 68, 69 and 94 of the murine heavy chain variable region of Fig. 4B.

7. (original) The antibody or fragment thereof of claim 4, wherein the at least one amino acid from the MN3 MAb is at least one amino acid selected from the group consisting of amino acid residue 20, 22, 39, 60, 70 and 100 of the murine light chain variable region Fig. 4A.

8. (original) The antibody or fragment thereof of claim 3, wherein the antibody or fragment thereof is encoded by a portion of a cMN3Vk nucleotide sequence of figure 2A.

9. (original) The antibody or fragment thereof of claim 3, wherein the antibody or fragment thereof is encoded by a portion of a cMN3VH nucleotide sequence of figure 2B.

10. (original) The antibody or fragment thereof of claim 3, wherein the antibody or fragment thereof is encoded by a portion of a nucleotide sequence of figure 5A.

11. (original) The antibody or fragment thereof of claim 3, wherein the antibody or fragment thereof is encoded by a portion of a nucleotide sequence of figure 5B.

12. (currently amended) A CDR-grafted humanized heavy chain comprising the complementarity determining regions (CDRs) of a MN3 MAb and the framework region of the heavy chain variable region of a human antibody and the heavy chain constant region of a human antibody, wherein the CDRs of the heavy chain variable region of the humanized MN3 MAb comprise a CDR1 comprising an amino acid sequence of NYGMN **(SEQ ID NO:**

4), a CDR2 comprising an amino acid sequence of WINTYTGEPTYADDFKG (SEQ ID NO: 5), and a CDR3 comprising an amino acid sequence of KGWMDFNSSLDY (SEQ ID NO: 6).

13. (currently amended) A CDR-grafted humanized light chain comprising the complementarity determining regions (CDRs) of a MN3 MAb and the framework region of the light chain variable region of a human antibody and the light chain constant region of a human antibody, wherein the CDRs of the light chain variable region of the humanized MN3 MAb comprise a CDR1 comprising an amino acid sequence RSSQSIVHSNGNTYLE (SEQ ID NO: 1), a CDR2 comprising an amino acid sequence KVSNRFS (SEQ ID NO: 2) and a CDR3 comprising an amino acid sequence FQGSHVPPT (SEQ ID NO: 3).

14. (original) The antibody or fragment thereof claim 1, wherein the fragment is selected from the group consisting of Fv, $F(ab')_2$, Fab' and Fab.

15. (original) A diagnostic/detection or therapeutic immunoconjugate comprising an antibody component that comprises an MAb or fragment thereof of claim 1 or an antibody fusion protein or fragment thereof that comprises the antibody of claim 1, wherein the antibody component is bound to at least one diagnostic/detection agent or at least one therapeutic agent.

16. (original) The diagnostic/detection immunoconjugate of claim 15, wherein the diagnostic/detection agent comprises at least one photoactive diagnostic/detection agent.

17. (original) The diagnostic/detection immunoconjugate of claim 16, wherein the photoactive diagnostic agent comprises a chromagen or dye.

18. (original) The diagnostic/detection immunoconjugate of claim 15, wherein the diagnostic/detection agent is a radionuclide with an energy between 20 and 10,000 keV.

19. (original) The diagnostic/detection immunoconjugate of claim 18, wherein the radionuclide is a gamma-, beta- or a positron-emitting isotope.

20. (original) The diagnostic/detection immunoconjugate of claim 19, wherein the radionuclide is selected from the group consisting of ^{18}F, ^{51}Mn, ^{52m}Mn, ^{52}Fe, ^{55}Co, ^{62}Cu, ^{64}Cu,

^{68}Ga, ^{72}As, ^{75}Br, ^{76}Br, ^{82m}Rb, ^{83}Sr, ^{86}Y, ^{89}Zr, ^{94m}Tc, ^{110}In, ^{120}I, ^{124}I, ^{51}Cr, ^{57}Co, ^{58}Co, ^{59}Fe, ^{67}Cu, ^{67}Ga, ^{75}Se, ^{97}Ru, ^{99m}Tc, ^{111}In, ^{114m}In, ^{123}I, ^{125}I, ^{131}I, ^{169}Yb, ^{197}Hg, and ^{201}Tl.

21. (original) The diagnostic/detection immunoconjugate of claim 15, wherein the diagnostic agent is a contrast agent.

22. (original) The diagnostic/detection immunoconjugate of claim 21, wherein the contrast agent is a paramagnetic ion.

23. (original) The diagnostic/detection immunoconjugate of claim 21, wherein the contrast agent is an ultrasound-enhancing agent.

24. (original) The diagnostic/detection immunoconjugate of claim 23, wherein the ultrasound enhancing agent is a liposome that is conjugated to a chimeric, partially humanized or fully humanized MAb or fragment thereof.

25. (original) The diagnostic/detection immunoconjugate of claim 24, wherein the liposome is gas filled.

26. (original) The diagnostic/detection immunoconjugate of claim 22, wherein the paramagnetic ion comprises a metal selected from the group consisting of chromium (III), manganese (II), iron (III), iron (II), cobalt (II), nickel (II), copper (II), neodymium (III), samarium (III), ytterbium (III), gadolinium (III), vanadium (II), terbium (III), dysprosium (III), holmium (III) and erbium (III).

27. (original) The diagnostic/detection immunoconjugate of claim 21, wherein the contrast agent is a radiopaque compound.

28. (original) The diagnostic/detection immunoconjugate of claim 27, wherein the radiopaque compound is selected from the group consisting of iodine compounds, barium compounds, gallium compounds and thallium compounds.

29. (original) The therapeutic immunoconjugate of claim 15, wherein the therapeutic agent is selected from the group consisting of a radionuclide, boron, gadolinium

or uranium atoms, an immunomodulator, a cytokine, a hormone, a hormone antagonist, an enzyme, an enzyme inhibitor, a photoactive therapeutic agent, a cytotoxic drug, a toxin, an angiogenesis inhibitor, a different antibody and a combination thereof.

30. (original) The therapeutic immunoconjugate of claim 29, wherein the cytotoxic agent is a drug or a toxin.

31. (original) The therapeutic immunoconjugate of claim 30, wherein the drug is selected from the group consisting of antimitotic, alkylating, antimetabolite, angiogenesis-inhibiting, apoptotic, alkaloid, COX-2-inhibiting and antibiotic agents and combinations thereof.

32. (original) The therapeutic immunoconjugate of claim 30, wherein the drug is selected from the group consisting of nitrogen mustards, ethylenimine derivatives, alkyl sulfonates, nitrosoureas, triazenes, folic acid analogs, anthracyclines, taxanes, COX-2 inhibitors, pyrimidine analogs, purine analogs, antibiotics, enzymes, epipodophyllotoxins, platinum coordination complexes, vinca alkaloids, substituted ureas, methyl hydrazine derivatives, adrenocortical suppressants, hormone antagonists, enzyme inhibitors, endostatin, taxols and other taxanes, camptothecins, doxorubicins and their analogs, and a combination thereof.

33. (original) The therapeutic immunoconjugate of claim 30, wherein the toxin is selected from the group consisting of plant, microbial, and animal toxins, and a synthetic variation thereof.

34. (original) The therapeutic immunoconjugate of claim 33, wherein the toxin is selected from the group consisting of ricin, abrin, alpha toxin, saporin, ribonuclease (RNase), DNase I, *Staphylococcal* enterotoxin-A, pokeweed antiviral protein, gelonin, diphtherin toxin, *Pseudomonas* exotoxin, and *Pseudomonas* endotoxin.

35. (original) The therapeutic immunoconjugate of claim 29, wherein the immunomodulator is selected from the group consisting of a cytokine, a stem cell growth

factor, a lymphotoxin, a hematopoietic factor, a colony stimulating factor (CSF), an interferon (IFN), a stem cell growth factor, erythropoietin, thrombopoietin, an antibody and a combination thereof.

36. (original) The therapeutic immunoconjugate of claim 35, wherein the lymphotoxin is tumor necrosis factor (TNF), the hematopoietic factor is an interleukin (IL), the colony stimulating factor is granulocyte-colony stimulating factor (G-CSF) or granulocyte macrophage-colony stimulating factor (GM-CSF)), the interferon is interferons-α, -β or -γ, and the stem cell growth factor designated "S1 factor".

37. (original) The therapeutic immunoconjugate of claim 35, wherein the cytokine is selected from the group consisting of IL-1, IL-2, IL-3, IL-6, IL-10, IL-12, IL-18, IL-21, interferon-γ, TNF-α and a combination thereof.

38. (original) The therapeutic immunoconjugate of claim 29, wherein the radionuclide is selected from the group consisting of an Auger emitter, a beta-emitter and an alpha-emitter.

39. (original) The therapeutic immunoconjugate of claim 29, wherein the radionuclide is selected from the group consisting of P-32, P-33, Sc-47, Fe-59, Cu-64, Cu-67, Se-75, As-77, Sr-89, Y-90, Mo-99, Rh-105, Pd-109, Ag-111, I-125, I-131, Pr-142, Pr-143, Pm-149, Sm-153, Tb-161, Ho-166, Er-169, Lu-177, Re-186, Re-188, Re-189, Ir-194, Au-198, Au-199, Pb-211, Pb-212, and Bi-213, Co-58, Ga-67, Br-80m, Tc-99m, Rh-103m, Pt-109, In-111, Sb-119, I-125, Ho-161, Os-189m, Ir-192, Dy-152, At-211, Bi-212, Ra-223, Rn-219, Po-215, Bi-211, Ac-225, Fr-221, At-217, Bi-213, Fm-255 and combinations thereof.

40. (original) The therapeutic immunoconjugate of claim 29, wherein the Boron atom is B-10.

41. (original) The therapeutic immunoconjugate of claim 29, wherein the Gadolinium atom is Gd-157.

42. (original) The therapeutic immunoconjugate of claim 29, wherein the Uranium atom is U-235.

43. (original) The therapeutic immunoconjugate of claim 29, wherein the radionuclide has an energy between 20 and 10,000 keV.

44. (original) The therapeutic immunoconjugate of claim 29, wherein the radionuclide is an Auger emitter and has an energy of less than 1000 keV.

45. (original) The therapeutic immunoconjugate of claim 29, wherein the radionuclide is a β emitter and has an energy between 20 and 5000 keV.

46. (original) The therapeutic immunoconjugate of claim 29, wherein the radionuclide is an α emitter and has an energy between 2000 and 10,000 keV.

47. (original) The therapeutic immunoconjugate of claim 29, wherein the photoactive therapeutic agent is a chromogen or dye.

48. (original) The diagnostic/detection or therapeutic immunoconjugate according to claim 24, wherein the diagnostic/detection or therapeutic agent is bound to the MAb or fragment thereof by means of a carbohydrate moiety.

49. (original) An antibody fusion protein or fragment thereof comprising at least two MAbs or fragments thereof, wherein the MAbs or fragments thereof are selected from the MAb or fragment thereof of claim 1.

50. (original) An antibody fusion protein or fragment thereof comprising at least one first MAb or fragment thereof of claim 1 and at least one second MAb or fragment thereof, other than the MAb or fragment thereof of claim 1.

51. (original) The antibody fusion protein or fragment thereof of claim 49, further comprising a diagnostic/detection or therapeutic agent conjugated to the fusion protein or fragment thereof.

52. (original) The antibody fusion protein or fragment thereof of claim 49, wherein the second MAb is a granulocyte-associated antibody.

53. (original) A method of treating a malignancy in a subject, comprising the step of administering to the subject a therapeutically effective amount of an antibody or fragment according to claim 1, formulated in a pharmaceutically acceptable vehicle.

54. (original) A method of treating a malignancy in a subject, comprising the step of administering to the subject a therapeutically effective amount of an immunoconjugate or fragment thereof of claim 15, formulated in a pharmaceutically acceptable vehicle.

55. (original) A method of diagnosing/detecting a malignancy in a subject, comprising the step of administering to the subject a diagnostically effective amount of an antibody or fragment thereof according to claim 1, formulated in a pharmaceutically acceptable vehicle.

56. (original) A method of diagnosing/detecting a malignancy in a subject, comprising the step of administering to the subject a diagnostically effective amount of a immunoconjugate or fragment thereof according to claim 15, formulated in a pharmaceutically acceptable vehicle.

57. (original) A method of treating or diagnosing/detecting a malignancy in a subject, comprising the step of administering to the subject a therapeutically or diagnostically effective amount of a fusion protein or fragment thereof of claim 49, formulated in a pharmaceutically acceptable vehicle.

58. (original) A method of treating or diagnosing/detecting a malignancy in a subject, comprising (i) administering to a subject in need thereof the antibody or fragments thereof of claim 1; (ii) waiting a sufficient amount of time for the antibody or fragment thereof that does not bind to the target to clear the subject's bloodstream; and (iii) administering to the subject a carrier molecule comprising a diagnostic agent, a therapeutic agent, or a combination thereof, that binds to a binding site of the antibody.

59. (original) A DNA sequence comprising a nucleic acid encoding an MAb or fragment thereof selected from the group consisting:

(A) a MAb or fragment thereof of claim 1;

(B) an antibody fusion protein or fragment thereof comprising at least two of the MAbs or fragments thereof;

(C) an antibody fusion protein or fragment thereof comprising at least one first MAb or fragment thereof comprising the MAb or fragment thereof of claim 1 and at least one second MAb or fragment thereof, other than the MAb or fragment thereof of claim 1; and

(D) an antibody fusion protein or fragment thereof comprising at least one first MAb or fragment thereof comprising the MAb or fragment thereof of claim 1 and at least one second MAb or fragment thereof, other than the MAb or fragment thereof of claim 1 wherein the second MAb is selected from the group consisting of MN-2, MN3, MN-15, NP-1, NP-2, BW 250/183, and antibodies against NCA-90, NCA-95, CD15, or CD33.

60. (original) An expression vector comprising the DNA sequence of claim 59.

61. (original) A host cell comprising the DNA sequence of claim 59.

62. (original) A method of delivering a diagnostic/detection or therapeutic agent, or a combination thereof, to a target comprising (i) providing a composition comprising an immunoconjugate that comprises the antibody or fragment thereof of claim 1 and (ii) administering to a subject in need thereof the composition.

63. (original) The method of claim 62, wherein the Mab antibody is administered in a dosage of 20 to 2000 milligrams protein per dose.

64. (original) The method of claim 62, wherein the dosage is repeatedly administered.

65. (original) A method of diagnosing or detecting a malignancy in a subject comprising (i) performing an in vitro diagnosis assay on a specimen from the subject with a composition comprising a MAb or fragment thereof or a antibody fusion protein or fragment thereof of claim 1.

66. (original) The method of claim 65, wherein the in vitro diagnosis assay is selected from the group consisting of immunoassays, RT-PCR and immunohistochemistry.

67. (original) The method of claim 66, wherein the diagnostic assay is RT-PCR or immunoassays.

68. (original) The method of claim 67, wherein the specimen is body fluid or a tissue or cell population.

69. (original) The method of claim 66, wherein the diagnostic assay is immunohistochemistry or immunocytochemistry.

70. (original) The method of claim 69, wherein the specimen is a cell aliquot or a tissue.

71. (original) The method of claim 65 wherein the subject is a mammal.

72. (original) The method of 71, wherein the subject is a human.

73. (original) The method of 71, wherein the subject is a domestic pet.

74. (original) The method of 71, wherein the subject is selected from the group consisting of a horse, dog, and cat.

75. (currently amended) A method for detecting or treating cancer or an ischemic lesion expressing a target that can be recognized by a Mab or fragment thereof that binds NCA90 in a mammal, comprising:

(A) administering an effective amount of a bispecific antibody or antibody fragment comprising at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds a targetable conjugate, wherein the one arm that specifically binds a targeted tissue is an antibody or fragment of claim 1, and

(B) administering a targetable conjugate selected from the group consisting of

(i) DOTA-Phe-Lys(HSG)-D-Tyr-Lys(HSG)-NH_2;

(ii) DOTA-Phe-Lys(HSG)-Tyr-Lys(HSG)-NH_2 **(SEQ ID NO: 7)**;

(iii) Ac-Lys(HSG)D-Tyr-Lys(HSG)-Lys(Tscg-Cys)-NH_2;

(iv) DOTA-D-Asp-D-Lys(HSG)-D-Asp-D-Lys(HSG)- NH_2;

(v) DOTA-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

(vi) DOTA-D-Tyr-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

(vii) DOTA-D-Ala-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

(viii) DOTA-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-NH_2;

(ix) Ac-D-Phe-D-Lys(DOTA)-D-Tyr-D-Lys(DOTA)-NH_2;

(x) Ac-D-Phe-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-NH_2;

(xi) Ac-D-Phe-D-Lys(Bz-DTPA)-D-Tyr-D-Lys(Bz-DTPA)-NH_2;

(xii) Ac-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(Tscg-Cys)-NH_2;

(xiii) DOTA-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(Tscg-Cys)-NH_2;

(xiv) (Tscg-Cys)-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(DOTA)-NH_2;

(xv) Tscg-D-Cys-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

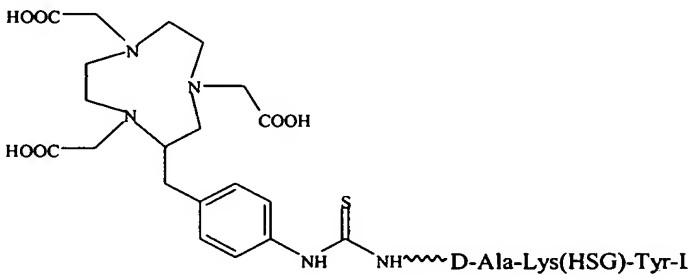
(xvi) (Tscg-Cys)-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

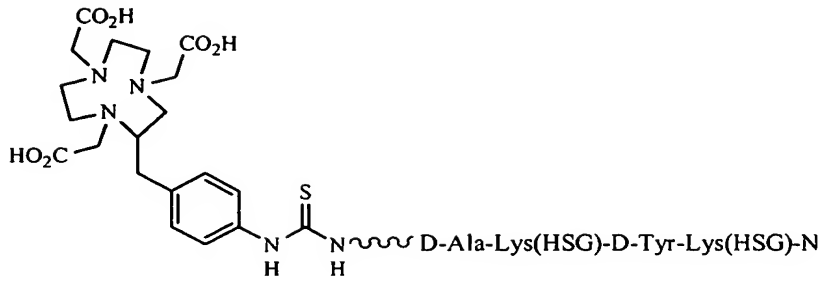
(xvii) Ac-D-Cys-D-Lys(DOTA)-D-Tyr-D-Ala-D-Lys(DOTA)-D-Cys-NH_2;

(xviii) Ac-D-Cys-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-NH_2;

(xix)Ac-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-D-Lys(TscG-Cys)-NH_2;

(xx) Ac-D-Lys(DOTA)-D-Tyr-D-Lys(DOTA)-D-Lys(TscG-Cys)-NH_2;

(xxi) 

(xxii) 

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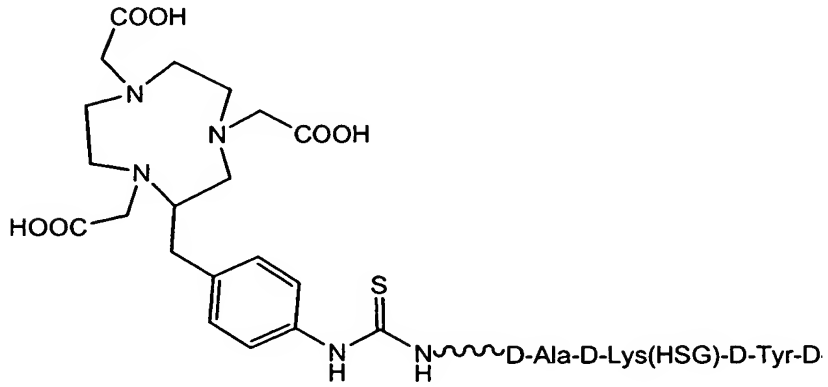
(xxii) 

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76. (original) A method of claim 75, further comprising administering to the subject a clearing composition, and allowing the composition to clear non-localized antibodies or antibody fragments from circulation.

77. (original) A kit useful for treating or identifying diseased tissues in a subject comprising:

(A) a bi-specific antibody or antibody fragment having at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds a targetable conjugate, wherein the one arm that specifically binds a targeted tissue is a granulocyte antibody or fragment thereof;

(B) a first targetable conjugate which comprises a carrier portion which comprises or bears at least one epitope recognizable by the at least one other arm of the bi-

specific antibody or antibody fragment, and one or more conjugated therapeutic or diagnostic agents; and

(C) optionally, a clearing composition useful for clearing non-localized antibodies and antibody fragments; and

(D) optionally, when the therapeutic agent conjugated to the first targetable conjugate is an enzyme,

(i) a prodrug, when the enzyme is capable of converting the prodrug to a drug at the target site; or

(ii) a drug which is capable of being detoxified in the subject to form an intermediate of lower toxicity, when the enzyme is capable of reconverting the detoxified intermediate to a toxic form, and, therefore, of increasing the toxicity of the drug at the target site, or

(iii) a prodrug which is activated in the subject through natural processes and is subject to detoxification by conversion to an intermediate of lower toxicity, when the enzyme is capable of reconverting the detoxified intermediate to a toxic form, and, therefore, of increasing the toxicity of the drug at the target site, or

(iv) a second targetable conjugate which comprises a carrier portion which comprises or bears at least one epitope recognizable by the at least one other arm of the bi-specific antibody or antibody fragment, and a prodrug, when the enzyme is capable of converting the prodrug to a drug at the target site.

78. (currently amended) The kit of claim 77, wherein the targetable conjugate is selected from the group consisting of:

(A) administering an effective amount of a bispecific antibody or antibody fragment comprising at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds a targetable conjugate, wherein the one arm that specifically binds a targeted tissue is an antibody or fragment of claim 1, and

(B) administering a targetable conjugate selected from the group consisting of

(i) DOTA-Phe-Lys(HSG)-D-Tyr-Lys(HSG)-NH_2;

(ii) DOTA-Phe-Lys(HSG)-Tyr-Lys(HSG)-NH_2 **(SEQ ID NO: 7)**;

(iii) Ac-Lys(HSG)D-Tyr-Lys(HSG)-Lys(Tscg-Cys)-NH_2;

(iv) DOTA-D-Asp-D-Lys(HSG)-D-Asp-D-Lys(HSG)- NH_2;

(v) DOTA-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

(vi) DOTA-D-Tyr-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

(vii) DOTA-D-Ala-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

(viii) DOTA-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-NH_2;

(ix) Ac-D-Phe-D-Lys(DOTA)-D-Tyr-D-Lys(DOTA)-NH_2;

(x) Ac-D-Phe-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-NH_2;

(xi) Ac-D-Phe-D-Lys(Bz-DTPA)-D-Tyr-D-Lys(Bz-DTPA)-NH_2;

(xii) Ac-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(Tscg-Cys)-NH_2;

(xiii) DOTA-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(Tscg-Cys)-NH_2;

(xiv) (Tscg-Cys)-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(DOTA)-NH_2;

(xv) Tscg-D-Cys-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

(xvi) (Tscg-Cys)-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

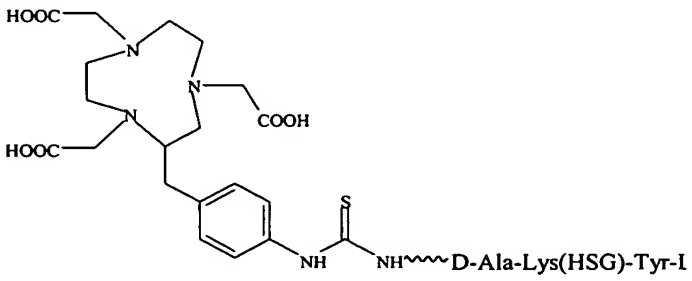
(xvii) Ac-D-Cys-D-Lys(DOTA)-D-Tyr-D-Ala-D-Lys(DOTA)-D-Cys-NH_2;

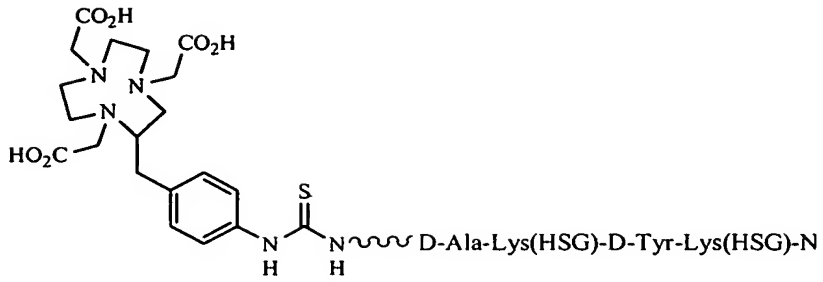
(xviii) Ac-D-Cys-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-NH_2;

(xix)Ac-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-D-Lys(TscG-Cys)-NH_2;

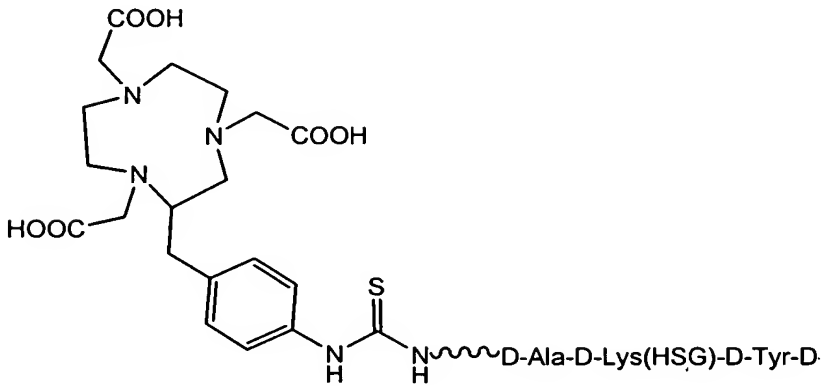
(xx) Ac-D-Lys(DOTA)-D-Tyr-D-Lys(DOTA)-D-Lys(TscG-Cys)-NH_2;

(xxi)



(xxii) 

; and

(xxii) 

79. (original) A method of screening for a targetable conjugate comprising:

(A) contacting the targetable construct with a bi-specific antibody or antibody fragment having at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds the targetable conjugate to give a mixture, wherein the one arm that specifically binds a targeted tissue is an antibody or fragment of claim 1; and

(B) optionally incubating the mixture; and

(C) analyzing the mixture.

80. (currently amended) A method for imaging malignant or ischemic tissue or cells in a mammal expressing an antigen recognized by a Mab or fragment thereof that binds NCA90, comprising:

(A) administering an effective amount of a bispecific antibody or antibody fragment comprising at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds a targetable conjugate, wherein the one arm that specifically binds a targeted tissue is an antibody or fragment of claim 1; and

(B) administering a targetable conjugate selected from the group consisting of

(i) DOTA-Phe-Lys(HSG)-D-Tyr-Lys(HSG)-NH_2;

(ii) DOTA-Phe-Lys(HSG)-Tyr-Lys(HSG)-NH_2 **(SEQ ID NO: 7)**;

(iii) Ac-Lys(HSG)D-Tyr-Lys(HSG)-Lys(Tscg-Cys)-NH_2;

(iv) DOTA-D-Asp-D-Lys(HSG)-D-Asp-D-Lys(HSG)- NH_2;

(v) DOTA-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

(vi) DOTA-D-Tyr-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

(vii) DOTA-D-Ala-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

(viii) DOTA-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-NH_2;

(ix) Ac-D-Phe-D-Lys(DOTA)-D-Tyr-D-Lys(DOTA)-NH_2;

(x) Ac-D-Phe-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-NH_2;

(xi) Ac-D-Phe-D-Lys(Bz-DTPA)-D-Tyr-D-Lys(Bz-DTPA)-NH_2;

(xii) Ac-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(Tscg-Cys)-NH_2;

(xiii) DOTA-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(Tscg-Cys)-NH_2;

(xiv) (Tscg-Cys)-D-Phe-D-Lys(HSG)-D-Tyr-D-Lys(HSG)-D-Lys(DOTA)-NH_2;

(xv) Tscg-D-Cys-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

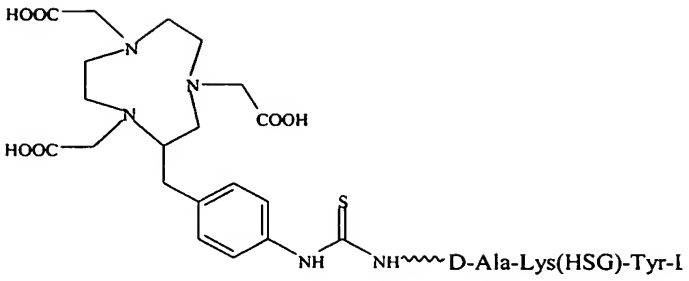
(xvi) (Tscg-Cys)-D-Glu-D-Lys(HSG)-D-Glu-D-Lys(HSG)-NH_2;

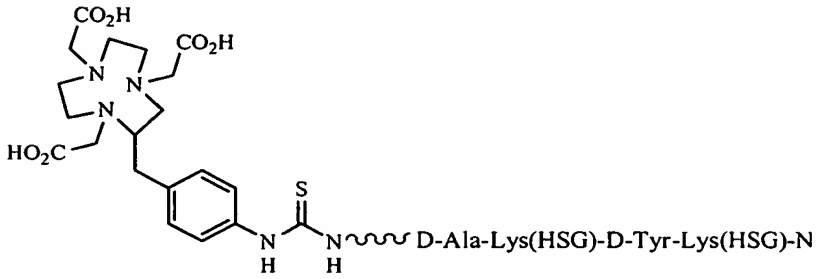
(xvii) Ac-D-Cys-D-Lys(DOTA)-D-Tyr-D-Ala-D-Lys(DOTA)-D-Cys-NH_2;

(xviii) Ac-D-Cys-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-NH_2;

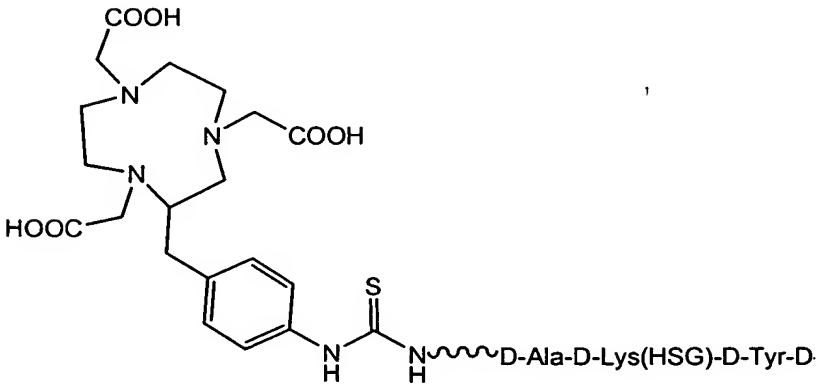
(xix)Ac-D-Lys(DTPA)-D-Tyr-D-Lys(DTPA)-D-Lys(TscG-Cys)-NH_2;

(xx) Ac-D-Lys(DOTA)-D-Tyr-D-Lys(DOTA)-D-Lys(TscG-Cys)-NH_2;

(xxi) 

(xxii) 

; and

(xxii) 

81. (original) A method of detecting or treating a condition selected from the group consisting of infection, inflammation, myeloid leukemias and infiltration of the bone marrow with metastatic cancer cells comprising administering an antibody or fragment thereof of claim 1 to a subject.

82. (original) The method of claim 81 further comprising detecting whether the antibody or fragment thereof binds to a target.

83. (original) The method of claim 81, wherein the Mab or fragment thereof is MN3 and is selected from the group consisting of a chimeric MN3, a humanized MN3, a human MN3, a murine MN3, and a fusion protein comprising MN3.

84. (original) The method of claim 81, wherein said infection or inflammation is the result of cystic fibrosis in said subject.

85. (original) The method of claim 81, wherein said Mab or fragment thereof is bound to at least one diagnostic agent.

86. (original) The method of claim 85, wherein said diagnostic agent is selected from the group consisting of a radioisotope, an enzyme, a fluorescent label, a chemiluminescent label, a bioluminescent label and a paramagnetic label.

87. (original) The method of claim 85, wherein said diagnostic agent is selected from the group consisting of an γ-emitting radioisotope, a positron-emitting (β+) radioisotope, an x-ray or computed tomography-enhancing contrast agent, a fluorescent-emitting compound, an MRI contrast agent, and/or an ultrasound enhancing agent.

88. (original) The method of claim 85, wherein said diagnostic agent is a radionuclide, wherein said radionuclide has a decay energy in the range of 20 to 4,000 keV.

89. (original) The method of claim 88, wherein said radionuclide is selected from the group consisting of ^{11}C, ^{13}N, ^{15}O, ^{18}F, ^{32}P, ^{51}Mn, ^{52m}Mn, ^{52}Fe, ^{55}Co, ^{62}Cu, ^{64}Cu, ^{67}Cu, ^{67}Ga, ^{68}Ga, ^{72}As, ^{75}Br, ^{76}Br, ^{82m}Rb, ^{83}Sr, ^{86}Y, ^{89}Zr, ^{94m}Tc, ^{94}Tc, ^{99m}Tc, ^{110}In, ^{111}In, ^{120}I, ^{123}I, ^{124}I, ^{125}I, ^{131}I, $^{154\text{-}158}Gd$, ^{177}Lu, ^{186}Re, ^{198}Au, ^{201}Tl, or other gamma-, beta-, or positron-emitters.

90. (original) The method of claim 88, wherein said radionuclide is selected from the group consisting of ^{51}Cr, ^{57}Co, ^{58}Co, ^{59}Fe, ^{75}Se, ^{97}Ru, ^{114m}In, ^{169}Yb, and ^{197}Hg.

91. (original) The method of claim 86, wherein said radioisotope emits in the range of about 10 keV to about 5,000 keV.

92. (original) The method of claim 91, wherein said radioisotope is selected from the group consisting of Iodine-126, Bromine-77, Indium-113m, Ruthenium-95, Ruthenium-103, Ruthenium-105, Tellurium-121m, Tellurium-122m, Tellurium-125m, Thulium-165, Thulium-167, Thulium-168, Silver-111, Platinum-197, Palladium-109, Phosphorus-33, Scandium-47, Samarium-153, Lutetium-177, Rhodium-105, Praseodymium-142, Praseodymium-143, Terbium-161, Holmium-166, Gold-199, Cobalt-58, Chromium-51, Iodine-123, Iodine-131, Indium-111, Gallium-67, Gallium-68, Ruthenium-97, Technetium-99m, Cobalt-57, Cobalt-58, Chromium-51, Iron-59, Selenium-75, Thallium-201, Fluorine-18, Technetium-94m and Ytterbium-169, and Iodine-125.

93. (original) The method of claim 88, wherein said paramagnetic label comprises a metal selected from the group consisting of chromium (III), manganese (II), iron (III), iron (II), cobalt (II), nickel (II), copper (II), neodymium (III), samarium (III), ytterbium (III), gadolinium (III), vanadium (II), terbium (III), dysprosium (III), holmium (III) and erbium (III).

94. (original) The method of claim 85, wherein said diagnostic agent is a radiopaque compound.

95. (original) The method of claim 84, wherein said radiopaque compound is selected from the group consisting of iodine compounds, barium compounds, gallium compounds and thallium compounds.

96. (original) The method of claim 95, wherein said radiopaque compound is selected from the group consisting of barium, diatrizoate, ethiodized oil, gallium citrate, iocarmic acid, iocetamic acid, iodamide, iodipamide, iodoxamic acid, iogulamide, iohexol, iopamidol, iopanoic acid, ioprocemic acid, iosefamic acid, ioseric acid, iosulamide meglumine, iosemetic acid, iotasul, iotetric acid, iothalamic acid, iotroxic acid, ioxaglic acid, ioxotrizoic acid, ipodate, meglumine, metrizamide, metrizoate, propyliodone, and thallous chloride.

97. (original) The method of claim 87, wherein said ultrasound enhancing agent is a liposome.

98. (original) The method of claim 97, wherein said liposome is gas filled.

99. (original) The method of claim 85, wherein said diagnostic agent is a radiological contrast agent useful for magnetic resonance imaging.

100. (original) The method of claim 99, wherein said radiological contrast agent is selected from the group consisting of gadolinium, manganese, dysprosium, lanthanum, iron, chromium, copper, cobalt, nickel, rhenium, europium, terbium, holmium, or neodymium.

101. (original) The method of claim 86, wherein said fluorescent label is selected from the group consisting of rhodamine, fluorescein, renographin, fluorescein isothiocyanate, phycoerytherin, phycocyanin, allophycocyanin, o-phthaldehyde and fluorescamine.

102. (original) The method of claim 86, wherein said chemiluminescent label is selected from the group consisting of luminol, isoluminol, an aromatic acridinium ester, an imidazole, an acridinium salt and an oxalate ester.

103. (original) The method of claim 86, wherein said bioluminescent label is selected from the group consisting of luciferin, luciferase and aequorin.

104. (original) The method of claim 86, wherein said enzyme is selected from the group consisting of malate dehydrogenase, staphylococcal nuclease, delta-V-steroid isomerase, yeast alcohol dehydrogenase, α-glycerophosphate dehydrogenase, triose phosphate isomerase, horseradish peroxidase, alkaline phosphatase, asparaginase, glucose oxidase, β-galactosidase, ribonuclease, urease, catalase, glucose-6-phosphate dehydrogenase, glucoamylase and acetylcholinesterase.

105. (original) The method of claim of 81, further comprising administering to said subject concurrently or sequentially a therapeutically effective amount of a therapeutic conjugate comprising at least one MAb bound to at least one therapeutic agent, wherein

said MAb comprises at least one humanized, chimeric, human or murine MAb selected from the group consisting of BW 250/183, MN-2, MN-15, NP-2, NP-1 and anti-CD15 formulated in a pharmaceutically acceptable vehicle.106 . The method of claim 81, wherein said antibody or fragment thereof is administered before, in conjunction with, or after a second anti-granulocyte antibody.

106. (original) The method of claim 81, wherein said antibody or fragment thereof is administered before, concurrently or after a therapeutic or diagnostic agent.

In the Drawings:

Appendix A contains drawing replacement sheets for Figures 1A, 1B, 4A, and 4B.

Appendix B contains Annotated Marked-up drawing sheets showing the changes made to Figures 1A, 1B, 4A, and 4B in the drawing replacement sheets.